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EXAMINER	
FIALKOWSKI, MICHAEL R	
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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No.	Applicant(s)	
	10/562,696	TOKURA ET AL.	
	Examiner	Art Unit	
	MICHAEL FIALKOWSKI	2466	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE *3* MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *17 May 2010*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *14-27* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *14-27* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *30 December 2005* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☒ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☒ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☐ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application
6) ☐ Other: _____.

DETAILED ACTION

This office action is in response to amendments filed May 17, 2010. Claims 14-27 are pending with Claims 1-13 having been cancelled.

Priority

1. Acknowledgment is made of applicant's claim for foreign priority based on applications filed in Japan on July 7, 2003, July 31, 2003, and September 26, 2003. It is noted, however, that applicant has not filed certified copies of the 2003-271474, 2003-283871, and 2003-334662 application as required by 35 U.S.C. 119(b).

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to

consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. Claims 14,15,26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ely et al (7,606,909) in view of Gonda (2003/0067928) & Abaye (7,260,060).

Re claim 14, Ely et al discloses a communications network comprising a plurality of terminals (for example, customers and agents (Figure 1), and network resource management means (conference controller [col. 6, lines 42-60]) configuring a path traversing any one or more of the one or more switching hubs (for example, media handler routes media [col. 3, lines 32-40]) between a call request terminal and a call requested terminal amongst the plurality of terminals, wherein:

each one of the plurality of terminals comprises:

means for transmitting a call request (call is initiated by a customer [col. 4, lines 50-60]) containing information on the transmission capacity (device capability info, including video, audio, and data codec support [col. 5, lines 64-67]) whose allocation is requested in order to perform communication, along with its own terminal address and the address of the call requested terminal (information includes IP address information [col. 4, lines 53-60] & type of media service, media endpoints, and media sources [col. 7, lines 30-36]), when the terminal itself operates as a call request terminal (for example, customer 150 [col. 3, lines 10-19]);

means for transmitting a receive acknowledgement when it is itself communication-enabled to the call request terminal associated with a call request via the network

resource management means when a call request is received (for example, agent manager responds with the name and IP address of an available agent in response to an call setup event to an agent [col. 11, lines 20-27]) and the terminal itself operates as a call requested terminal (for example, agent [col. 4, lines 10-20]);

means for recognizing that communication with guaranteed transmission capacity has been established (transmission bandwidth required based on codec [col. 11, lines 55-67]) and initiating transmission of data frames to the call requested terminal upon receipt of a receive acknowledgement from the call requested terminal when operating as a call request terminal (once a call is setup, data flows between the participants [col. 4, lines 43-50]); and

means for transmitting a clear request to a peer terminal via the network resource management means upon completion of communication (receives a call clear request [col. 7, lines 20-27]); and

the network resource management means comprises:

means for storing the connection between the terminals and the switching hubs, as well as between the switching hubs, and the transmission capacity of the transmission links associated with this connection (bandwidth manager manages bandwidth for all connections in all parts of the network [col. 8, lines 5-17]);

means for (for example, call manager and event handler (Figure 4)) consulting the storage means in response to a call request from a call request terminal and making an assessment as to whether the transmission capacity to be used can be assured along a

path traversing switching hubs between a call request terminal and a call requested terminal ([col. 8, lines 10-25]);

means for increasing the transmission capacity to be used in the storage means by an amount corresponding to said assurance (col. 11, lines 40-67]) and transmitting a call request from said call request terminal to said call requested terminal if, in accordance with the assessment results of the assessment means, it can be assured (inherently the call request would reach the call requested terminal (See Figure 4, labels 140 and 160), or transmitting an incoming call rejection to said call request terminal if it cannot be assured (bandwidth manager may reject the call [col. 11, lines 57-62]);

means for forwarding a receive acknowledgement from the call requested terminal to the corresponding call request terminal (handles call setup including negotiation between customer and agent [col. 7, lines 11-45] [col. 10, lines 40-44] [col. 4, lines 30-37]); and

means for releasing transmission capacity and withdrawing it from the storage means when a clear request is received from the other terminal (for example, agent hangs up IP phone the call clear is received over the Q.931 interface [col. 11, lines 13-18]) participating in communication in case transmission capacity corresponding to the clear request has been assured (bandwidth associated with the cleared call are released by the bandwidth manager [col. 15, lines 1-14]); and although Ely et al discloses the call request terminal is a terminal carrying out stream data delivery service ([col. 4, lines 40-50]), does not explicitly disclose:

transmitting a call rejection when it is itself communication-disabled;

the network resource management means forwarding a call rejection from the call requested terminal to the corresponding call request terminal,

means for releasing transmission capacity assured for the call request associated with the call rejection and withdrawing it from the storage means when a call rejection is received from the call requested terminal;

one or more switching hubs that learn respective MAC (Media Access Control) addresses of the terminals in communication with each other and configure a single path between learned terminals; and

said call requested terminal, prior to receiving a stream data delivery service, issues a notification of completion of preparations for receiving the delivery service using a broadcast frame or a frame destined for said call request terminal to make said switching hubs learn the MAC address of said call requested terminal.

However, Ely et al teaches of a call rejection based on the network resource management means not having enough bandwidth for a call ([col. 13, lines 55-60])

and the network resource management means releases transmission capacity assured for the call request associated with a “done” ([col. 14, lines 25-37]). It would have been obvious for one of ordinary skill in the art at the time of the invention to use the teachings of Ely et al to have the call requested terminal transmit a call rejection in order to account for the call requested terminal not being able to support a call. The modified Ely et al does not explicitly disclose switching hubs learning respective MAC (Media Access Control) addresses of terminals in communication with each other and configuring a single path between learned terminals; and said call requested terminal,

prior to receiving a stream data delivery service, issues a notification of completion of preparations for receiving the delivery service using a broadcast frame or a frame destined for said call request terminal to make said switching hubs learn the MAC address of said call requested terminal.

However, Abaye teaches of the call requested terminal, prior to receiving the stream data delivery service, issues a notification of completion of preparations for receiving the delivery service using a frame destined for the call request terminal (for example, in Figure 5, the RESV message confirms the flow and the network path [col. 13, lines 47-60]). It would have been obvious for one of ordinary skill in the art at the time of the invention to include a notification to the call request terminal as taught by Abaye in order to set up a connection between two end parties. Abaye does not explicitly disclose response to the notification, the switching hubs along the path between the call request terminal and the call requested terminal finish learning the MAC address of the call requested terminal and switching hubs learning respective MAC (Media Access Control) addresses of terminals in communication with each other and configuring a single path between learned terminals.

However, Gonda teaches of one or more switching hubs (nodes along the path) that learn respective MAC (Media Access Control) addresses of the terminals (source and destination MAC addresses [0038][0040]) in communication with each other and configure a single path between learned terminals (circuit/connection/flow using STP [0038][0042]) and the switching hubs along the path between the call request terminal and the call requested terminal finish learning the MAC address of the call requested

terminal (for example, traveling the reverse direction to get to destination station S [0067] in a unidirectional circuit [0050][0070]). It would have been obvious for one of ordinary skill in the art at the time of the invention to include MAC address learning as taught by Gonda in the modified Ely et al in order to manage flows in a well known network layer (Gonda [0002][0011]).

Re claim 15, note that Ely et al discloses the communications network wherein the network resource management means (for example, conference controller [col. 6, lines 43-59]) is provided in any one of the one or more switching hubs (for example, conference controller has a LAN module to connect to the packet based network [col. 6, lines 43-59] and in Figure 1, forwards messages between a source and destination).

Re claim 26, Ely et al discloses a network resource management device (conference controller [col. 6, lines 42-60]) for configuring a path traversing one or more transmission links and one or more switching hubs (for example, media handler routes media [col. 3, lines 32-40]) between terminals (for example, customers and agents (Figure 1), wherein said network resource management device comprises:

storage means for storing information of connections between said terminals and said switching hubs, as well as between the switching hubs, and the transmission capacity of the transmission links associated with said connections (bandwidth manager manages bandwidth for all connections in all parts of the network [col. 8, lines 5-17]);

assessment means for (for example, call manager and event handler (Figure 4) consulting said storage means in response to a call request from a call request terminal and making an assessment as to whether the transmission capacity to be used can be

assured along a path traversing switching hubs between said call request terminal and said call requested terminal ([col. 8, lines 10-25]);

means for increasing the transmission capacity in said storage means by an amount corresponding to said assurance (col. 11, lines 40-67]) and transmitting the call request from said call request terminal to said call requested terminal if, in accordance with the assessment results of said assessment means, it can be assured (inherently the call request would reach the call requested terminal (See Figure 4, labels 140 and 160), or transmitting an incoming call rejection to said call request terminal if it cannot be assured (bandwidth manager may reject the call [col. 11, lines 57-62]);

means for forwarding a receive acknowledgement from the call requested terminal to the corresponding call request terminal (handles call setup including negotiation between customer and agent [col. 7, lines 11-45] [col. 10, lines 40-44] [col. 4, lines 30-37]); and

means for releasing transmission capacity assured for said call request and withdrawing it from said storage means when a clear request is received from a terminal (for example, agent hangs up IP phone the call clear is received over the Q.931 interface [col. 11, lines 13-18]) participating in communication (bandwidth associated with the cleared call are released by the bandwidth manager [col. 15, lines 1-14]); and

although Ely et al discloses a network with terminals and the call request terminal is a terminal carrying out stream data delivery service ([col. 4, lines 40-50]), does not explicitly disclose an Ethernet network comprising Ethernet terminals

means for forwarding a call rejection from the call requested terminal to the corresponding call request terminal, and

means for releasing transmission capacity assured for said call request associated with the call rejection and withdrawing it from said storage means when a call rejection is received from said call requested terminal; and

wherein, said call requested terminal, prior to receiving a stream data delivery service, issues a notification of completion of preparations for receiving the delivery service using a broadcast frame or a frame destined for said call request terminal to make said switching hubs learn the MAC address of said call requested terminal.

However, Ely et al teaches of a call rejection based on the network resource management means not having enough bandwidth for a call ([col. 13, lines 55-60])

and the network resource management means releases transmission capacity assured for the call request associated with a “done” ([col. 14, lines 25-37]). It would have been obvious for one of ordinary skill in the art at the time of the invention to use the teachings of Ely et al to have the call requested terminal transmit a call rejection in order to account for the call requested terminal not being able to support a call. The modified Ely et al does not explicitly disclose wherein, said call requested terminal, prior to receiving a stream data delivery service, issues a notification of completion of preparations for receiving the delivery service using a broadcast frame or a frame destined for said call request terminal to make said switching hubs learn the MAC address of said call requested terminal.

However, Abaye teaches of the call requested terminal, prior to receiving the stream data delivery service, issues a notification of completion of preparations for receiving the delivery service using a frame destined for the call request terminal (for example, in Figure 5, the RESV message confirms the flow and the network path [col. 13, lines 47-60]). It would have been obvious for one of ordinary skill in the art at the time of the invention to include a notification to the call request terminal as taught by Abaye in order to set up a connection between two end parties. Abaye does not explicitly disclose response to the notification, the switching hubs along the path between the call request terminal and the call requested terminal finish learning the MAC address of the call requested terminal.

However, Gonda teaches of an Ethernet network with Ethernet terminals ([0012]) and one or more switching hubs (nodes along the path) that learn respective MAC (Media Access Control) addresses of the terminals (source and destination MAC addresses [0038][0040]) in communication with each other and configure a single path between learned terminals (circuit/connection/flow using STP [0038][0042]) and the switching hubs along the path between the call request terminal and the call requested terminal finish learning the MAC address of the call requested terminal (for example, traveling the reverse direction to get to destination station S [0067] in a unidirectional circuit [0050][0070]). It would have been obvious for one of ordinary skill in the art at the time of the invention to include MAC address learning and an Ethernet network as taught by Gonda in the modified Ely et al in order to manage flows in a well known network layer and protocol (Gonda [0002][0011]).

5. Claims 27 is rejected under 35 U.S.C. 103(a) as being unpatentable over the modified Ely et al in view of Gonda & Abaye as applied to claim 26 above, and further in view of Lee (2003/0123388) and Zabihi et al (2004/0042454).

Re claim 27, the modified Ely et al in view of Gonda teaches the network resource management device according to claim 26, but does not explicitly disclose means for managing the usage status of VLAN identifiers represented by TCI, wherein: the managing means includes: means for attaching a VLAN tag containing TCI corresponding to an unused VLAN identifier to a receive acknowledgement when a receive acknowledgement is forwarded from the call requested terminal to the call request terminal; means for storing the VLAN identifier corresponding to the attached VLAN tag as being in use; and means which, upon receipt of a clear request with the VLAN tag attached thereto, stores the VLAN identifier as being unused.

However, Zabihi et al teaches of means for managing the usage status of VLAN identifiers, wherein: the managing means includes: means for attaching a VLAN tag corresponding to an unused VLAN identifier (chooses a unused VLAN identifiers [0061]) to a receive acknowledgement when a receive acknowledgement is forwarded from the call requested terminal to the call request terminal (for example, in a connection across a backbone network [0051]-[0052]) ;

means for storing the VLAN identifier corresponding to the attached VLAN tag as being in use (subsequently blocked for reuse and is stored in a roster of in-use VLAN identifiers centrally [0061]); and means which, upon receipt of a clear request with the

VLAN tag attached thereto (for example, when the VLAN identifier is no longer needed [0021]), stores the VLAN identifier as being unused (for example, surrenders or is an unused VLAN identifier [0061]). It would have been obvious for one of ordinary skill in the art at the time of the invention to use VLAN identifiers as taught by Zabihi et al in the modified device of Ely et al in order to extend a LAN beyond a physical area (Zabihi et al [0007]). Zabihi et al does not explicitly disclose a VLAN tag containing TCI.

However, Lee teaches of a VLAN tag containing TCI (See Figure 1 and 3-bit 802.1p identifier field is used to determine the priority level [0014]). It would have been obvious for one of ordinary skill in the art at the time of the invention to include TCI information indicating the priority as taught by Lee et al in the modified device of Ely et al in order to guarantee a high level of QoS for multimedia streams (Lee et al [0006]-[0007]).

6. Claims 17-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over the modified Ely et al in view of Gonda & Abaye as applied to claim 14 above, and further in view of Li et al (2004/0165528).

Re claim 17, the modified Ely et al teaches the communications network according to claim 14, but does not explicitly disclose: the plurality of terminals are terminals compliant with frames having guaranteed maximum transmission capacity and, on the network, Best-Effort type terminals compliant only with frames having no guaranteed maximum transmission capacity may co-exist therewith and the terminals compliant with frames having guaranteed maximum transmission capacity have means for appending priority markings to frames with guaranteed transmission capacity.

However, Li et al teaches of a plurality of terminals are terminals compliant with frames having guaranteed maximum transmission capacity (for example, EF class signifies premium service and AF4 signifies highest priority [0024]) and,

on the network, Best-Effort type terminals compliant only with frames having no guaranteed maximum transmission capacity may co-exist therewith (for example, best effort class [0024]) and

the terminals compliant with frames having guaranteed maximum transmission capacity have means for ([0023]-[0024]) appending priority markings (for example, marked by bits separating classes [0038]) to frames with guaranteed transmission capacity. It would have been obvious for one of ordinary skill in the art at the time of the invention to include priority classes as taught by Li et al in order to guarantee quality of service to the time-sensitive traffic.

Re claim 18, the modified Ely et al teaches the communications network according to claim 17, but does not explicitly disclose wherein: each of the switching hubs comprises means for sending input frames, if the input frames have priority markings, to transmission links in preference to input frames without priority markings. However, Li et al teaches of each of the switching hubs comprises means for sending input frames (for example, a per-hop forward behavior [0004]), if the input frames have priority markings, to transmission links in preference to input frames without priority markings (inherently priority markings are used to forward traffic over non-priority traffic [0004]). It would have been obvious for one of ordinary skill in the art at the time of the invention to include transmitting frames with priority markings over those without

markings as taught by Li et al in order to guarantee quality of service to differentiated traffic.

Re claim 19, the modified Ely et al teaches the communications network according to claim 18, but does not explicitly disclose wherein: each of the switching hubs comprises means which, whenever input frames have priority markings and the destination MAC addresses have been learned, sends said input frames to transmission links in preference to input frames without priority markings.

However, Gonda teaches of learning destination MAC addresses ([0038]). It would have been obvious for one of ordinary skill in the art at the time of the invention to learn destination MAC addresses as taught by Gonda in the modified network of Ely et al in order to establish a circuit/connection/flow between a source and destination (Gonda [0038]). Ely et al modified by Gonda does not explicitly teach wherein whenever input frames have priority markings, sending said input frames to transmission links in preference to input frames without priority markings.

However, Li et al teaches of each of the switching hubs comprises means for sending input frames (for example, a per-hop forward behavior [0004]) , if the input frames have priority markings, to transmission links in preference to input frames without priority markings (inherently priority markings are used to forward traffic over non-priority traffic [0004]). It would have been obvious for one of ordinary skill in the art at the time of the invention to include transmitting frames with priority markings over those without markings as taught by Li et al in order to guarantee quality of service to differentiated traffic.

Re claim 20, the modified Ely et al teaches the communications network according to claim 18, but does not explicitly disclose wherein each of the switching hubs comprises means for processing the MAC address learning of priority-marked frames in preference to frames without priority markings. However, Gonda teaches wherein each of the switching hubs comprises means for processing the MAC address learning of frames ([0038]) and uses DiffServ ([0035]) and QoS [0037]). It would have been obvious for one of ordinary skill in the art at the time of the invention to process priority marked frames in preference to frames without priority markings using the teachings of Gonda in the modified network of Ely et al in order to forward frames with priority markings before those of non-priority frames.

7. Claim 16 is rejected under 35 U.S.C. 103(a) as being unpatentable over the modified Ely et al in view of Gonda & Abaye as applied to claim 14 above, and further in view of Basso et al (6,690,678).

Re claim 16, the modified Ely et al teaches the communications network according to claim 14, but does not explicitly disclose wherein one or more switching hubs are connected to a tree structure. However, Basso et al teaches of one or more switching hubs (for example, backbone node) are connected to the tree structure ([col. 15, lines 1-25]). It would have been obvious for one of ordinary skill in the art at the time of the invention to include a network resource management means in the root of the tree structure as taught by Basso et al in the modified Ely et al in order to send

information that has to go to every node very quickly and efficiently (Basso et al [col. 15, lines 10-15]).

8. Claims 21 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over the modified Ely et al in view of Gonda, Abaye, & Li et al as applied to claim 17 above, and further in view of Lee.

Re claim 21, the modified Ely et al teaches the communications network according to claim 17, but does not explicitly disclose wherein three bits of TCI (Tag Control Information) that represent priority are used for priority indication. However, Lee et al teaches of wherein three bits of TCI (Tag Control Information) that represent priority are used for priority indication (3-bit 802.1p identifier field is used to determine the priority level [0014]). It would have been obvious for one of ordinary skill in the art at the time of the invention to include TCI information indicating the priority as taught by Lee et al in the modified network of Ely et al in order to guarantee a high level of QoS for multimedia streams (Lee et al [0006]-[0007]).

Re claim 22, the modified Ely et al teaches the communications network according to claim 21, wherein means for attaching or removing TCI from non-TCI-compliant frames is provided in switching hubs at the edge of the network. However, Lee et al teaches of means for attaching or removing TCI ([0063]) from non-TCI-compliant frames (for example, Diffserv packets [0057]-[0059]) is provided in switching hubs at the edge of the network ([0056][0062][0065]). It would have been obvious for one of ordinary skill in the art at the time of the invention to include TCI information in

non-TCI-compliant frames as taught by Lee et al in the modified network of Ely et al in order to multiple levels of QoS (Lee et al [0002][0064]-[0065]).

9. Claims 23-25 are rejected under 35 U.S.C. 103(a) as being unpatentable over the modified Ely et al in view of Gonda, Abaye, & Li et al as applied to claim 18 above, and further in view of Feuerstraeter (2003/0123393).

Re claim 23, the modified Ely et al teaches the communications network according to claim 18, but does not explicitly disclose wherein each one of the switching hubs comprises means for sending a PAUSE frame that halts transmission to the corresponding input transmission links when the buffer size of frames not subject to priority processing becomes equal to or more than a predetermined value Th_{max} and sending a PAUSE frame that disables the suspension of transmission to the corresponding transmission links when a predetermined value Th_{min} (Th_{max}>Th_{min}) is reached.

However, Feuerstraeter et al teaches of one of the switching hubs comprises means for ([0044]) sending a PAUSE frame (control message that pauses transmission) that halts transmission to the corresponding input transmission links when the buffer size of frames not subject to priority processing (indicated by a priority level in the control message [0033], where for example, a lowest priority [0041] and Figure 4) becomes equal to or more than a predetermined value Th_{max} (for example, low priority levels allocated a lower buffer threshold [0032]-[0033]) and sending a PAUSE frame that disables the suspension of transmission to the corresponding transmission links when a

predetermined value Th_{min} (for example, an arbitrary value below the threshold 308 [0044]) (Th_{max}>Th_{min}) is reached (pauses until a subsequent control message is received modifying/eliminating the hold for the particular priority level [0031]). It would have been obvious for one of ordinary skill in the art at the time of the invention to include a PAUSE frame to halt transmission of low priority frames as taught by Feuerstraeter et al in the modified network of Ely et al in order to prioritize higher priority traffic over lower priority traffic (Feuerstraeter et al [0032]).

Re claim 24, the modified Ely et al teaches the communications network according to claim 18, but does not explicitly disclose wherein each one of the switching hubs comprises means for configuring the threshold value of an input frame rate of one or more ports connected to the terminals manually or via access by the network resource management means, as well as means for handling frames with priority markings and frame rates exceeding the threshold value as non-priority frames.

However, Feuerstraeter et al teaches of each one of the switching hubs (flow control agent in each network interface [0026][0036]) comprises means for (for example, a machine-readable medium [0051]) configuring the threshold value of an input frame rate of one or more ports connected to the terminals manually ([0050] and block 702 identifies the receive capacity of a network interface [0041]) or via access by the network resource management means, as well as means for handling frames with priority markings and frame rates exceeding the threshold value as non-priority frames (for example, when the frame-rate exceeds the threshold, frames with priority marking at or below a specified level are stopped, thus negating any priority [0023][0033]). It

would have been obvious for one of ordinary skill in the art at the time of the invention to include a threshold value of the input frame rate of ports as taught by Feuerstraeter et al in the modified network of Ely et al in order to prioritize higher priority traffic over lower priority traffic (Feuerstraeter et al [0032]).

Re claim 25, the modified Ely et al teaches the communications network according to claim 18, but does not explicitly disclose wherein, amongst the switching hubs, hubs at an edge of the network comprise means which, upon receipt of a notification of source MAC addresses and destination MAC addresses for which a maximum transmission capacity is guaranteed from the network resource management means, insert the priority processing markings into frames with these MAC addresses, and, upon receipt of a notification of MAC addresses without guaranteed maximum transmission capacity from the network resource management means, remove the priority processing markings from the frames with these MAC addresses.

However, Feuerstraeter et al teaches at hubs at the edge of the network comprise means which (flow control agent in each network interface [0026][0036]), upon receipt of a notification of source MAC addresses and destination MAC addresses ([0018][0028]) for which the maximum transmission capacity is guaranteed from the network resource management means, insert the priority processing markings of frames with these MAC addresses (generates a control message designating a priority level above which content can be received [0031]), and, upon receipt of a notification of MAC addresses without guaranteed maximum transmission capacity from the network resource management means, remove the priority processing markings from the frames

with these MAC addresses (for example, when the frame-rate exceeds the threshold, frames with priority marking at or below a specified level are stopped, thus negating any priority [0023][0033]). It would have been obvious for one of ordinary skill in the art at the time of the invention to include a notification of guaranteed flows versus non-guaranteed flows as taught by Feuerstraeter et al in the modified network of Ely et al in order to prioritize higher priority traffic over lower priority traffic (Feuerstraeter et al [0032]).

Response to Arguments

10. Applicant's arguments with respect to claims 14-27 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

11. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any

extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL FIALKOWSKI whose telephone number is (571)270-5425. The examiner can normally be reached on Monday - Friday 10:30am-7pm EST.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Daniel Ryman can be reached on (571)272-3152. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/M. F./
Examiner, Art Unit 2466

/Daniel J. Ryman/
Supervisory Patent Examiner, Art Unit 2466